UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/451,665	11/30/1999	SHUNPEI YAMAZAKI	07977/017002	9359

26171 7590 11/15/2004

FISH & RICHARDSON P.C.
1425 K STREET, N.W.
11TH FLOOR
WASHINGTON, DC 20005-3500

EXAMINER	
SCHILLINGER, LAURA M	

ART UNIT	PAPER NUMBER
2813	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/451,665	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Laura M Schillinger	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 9/9/04.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) 1,2,4,5,7-13,15,16,18-23,25,26,28-34,36,37 and 39-82 is/are pending in the application.

4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4,5 and 7-11 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 08/620,462.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/9/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 12,13,15,16,18-21,33,34,36,37,39-42,48-51 and 56-82.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-2, 4-5, and 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Oka et al et al ('563).

In reference to claim 1, Oka et al teaches a method comprising:

forming a crystalline semiconductor film on an insulating surface (Col.17, lines: 40-45 Fig.5A (502))

forming an insulating film on the semiconductor film (Col.17, lines: 45-55 and Fig.5B (503));

introducing a first dopant through the insulating film by a first ion doping (Col.17, lines: 55-60 see also Col.15, lines: 45-55);

annealing the crystalline semiconductor film (Col.17, lines: 60-65);

forming a gate electrode over the insulating film (Col. 18, lines: 1-10 Fig. 5C (505)); and

introducing a second dopant impurity into the crystalline semiconductor film by a second ion doping by using the gate as a mask (Col.18 , lines: 50-60 and Fig.5C (507-508)),

wherein a peak of a concentration of the first dopant profile is located in the insulating film Oka teaches that the silicon oxide layer is formed over the crystalline substrate prior to and during ion implantation Col.17, lines: 49-62. Since applicant's specification teaches that doing so produces peak concentration within the SiO(x) layer, it is inferred that Oka's same steps create the same results.)

In reference to claim 2, Oka et al teaches wherein the insulating film is SiO (Col.17, line: 50).

In reference to claim 4, Oka et al teaches wherein the first dopant is B (Col.17, lines: 59-60).

In reference to claim 5 Oka et al teaches wherein the semiconductor film is polycrystalline Si (Col.17, lines: 40-45).

In reference to claim 7, Oka et al teaches wherein B is supplied by diborane gas (Col.17, lines:59-60)

In reference to claim 8, Oka et al teaches wherein the insulating film is removed (Fig.5F (503)-etching for contact holes).

In reference to claims 9 and 10, Oka fails to explicitly teach wherein the semiconductor device as the result of claim 1 is used in as a AMD nor a shift register having TFTs (however, the

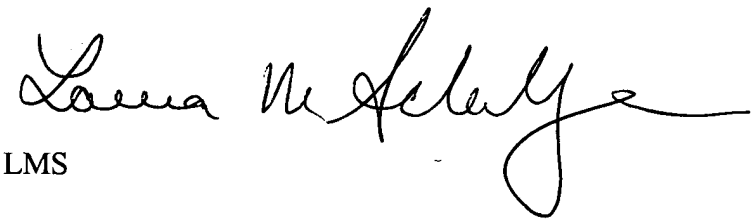
device as formed is automatically rejected with claim 1 and it is inherent that the device structure could be used in a AMD setting or as a shift register).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LMS

10/26/04